California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2002-0037
I.D. NO. 1B80020OHUM

FOR

SIMPSON TIMBER COMPANY
KORBEL SAWMILL
AND
WOODWASTE DISPOSAL SITE
CLASS III WASTE MANAGEMENT UNIT

Humboldt County

SAWMILL AND RECEIVING WATER MONITORING

The purpose of this monitoring program is to determine compliance with the NPDES permit effluent and receiving water limits. During the first discharge of each month from the constructed wetlands, grab samples shall be collected as follows: Samples shall be analyzed for turbidity, total suspended solids, (TSS) settleable solids, temperature (Temp), dissolved oxygen (DO), and pH, chemical oxygen demand COD, volatile suspended solids (VSS).

Sampling Station	Constituents								
Discharge Serial No. 001	Turbidity	pH	Color	DO	Temp	TSS	Settleable Solids	COD	VSS
Upstream	Turbidity	pH	Color	DO	Temp	TSS	Settleable Solids	COD	VSS
Downstream	Turbidity	pH	Color	DO	Temp	TSS	Settleable Solids	COD	VSS
Hatchery Creek	Turbidity	pH	Color	DO	Temp	TSS	Settleable Solids		
Culvert No. 1	Turbidity								
Culvert No. 2	Turbidity								

Samples shall be collected from the following locations (See Attachment B of Waste Discharge Requirements Order No. R1-2002-0037):

1. Upstream – North Fork Mad River at the water hole upstream of the mill site

2. Discharge Serial No. 001– Discharge from the sedimentation/constructed wetland treatment unit. The sample can be collected at any convenient point following treatment

3. Downstream – North Fork Mad River under the County road bridge between the mill and the village of Korbel

4. Hatchery Creek – Hatchery Creek just above its confluence with the North Fork Mad River

5. Culverts No. 1 and No. 2 – These culverts discharge to the North Fork Mad River between Discharge Serial No. 001 and the Downstream sample station. They drain the hillside above the mill and run under the mill to the River. Samples shall be collected from the culvert inlets upgradient of the mill.

Storm Water Discharge Visual Observations shall be made of one storm event per month during the wet season (October-May). Visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three working days without storm water discharges and that occur during scheduled facility operating hours.

Visual observations shall document the presence of any floating and suspended material, oil and grease, discoloration, turbidity, odor, and source of any pollutants. Records shall be maintained and include observation dates, locations observed, and response taken to reduce or prevent pollutants in storm water discharges. The visual observation records shall be submitted to the Regional Water Board in the monitoring reports.

Once per year the effluent shall be analyzed for acute toxicity in compliance with **I. GENERAL PROVISION** 18. Tests shall be conducted using rainbow trout (*Oncorhynchus mykiss*) as the test species. Results shall be provided in the annual report, and shall include a summary of the results from the three most recent samples.

Once during the life of the permit the permittee shall sample the Discharge Serial No. 001and have it analyzed for chronic toxicity, in compliance with **I. GENERAL PROVISION** 19 of the associated Order. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

(1) sample date(s)
(2) test initiation date
(3) test species
(4) end point values for each dilution (e.g. number of young, growth rate, percent survival)
(5) NOEC value(s) in percent effluent
(6) TUc values (100/NOEC, $100/IC_{25}$, and $100/EC_{25}$)
(7) Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable)
(8) Available water quality measurements for each test (ex. pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

The results of the chronic toxicity testing shall be provided in the annual monitoring report.

SAWMILL AND RECEIVING WATER REPORTING

Monthly reports shall include a tabular display of daily rainfall totals and analytical results, and a summary of visual observations. If no discharge occurs from Discharge Serial No. 001 during a month, the report shall so state. Results shall be reported such that they are received by the first day of the second month following sampling.

By July 1 of each year, an annual storm water report shall be submitted summarizing the wet season observations and collected data. The report shall discuss compliance with permit conditions and describe any additional control measures that may be needed to bring the discharge into compliance. The monitoring program will be reviewed and revised, if appropriate, following a review of the summary report.

WASTE MANAGEMENT UNIT MONITORING

Groundwater Monitoring

The objectives of groundwater monitoring are leak detection and evaluation of naturally-occurring variations in groundwater quality, if any.

Monitoring Wells No. 1 and 2, as shown in Attachment B of Waste Discharge Requirements Order No. R1-2002-0037, and any additional wells that may be installed, shall be monitored as follows:

1. Static water levels shall be recorded in April and September of each year. Top of casing, depth to groundwater, and water table elevation shall be reported in tabular fashion.

2. Representative grab samples shall be collected in April and September of each year. Prior to sampling, the bore hole shall be properly purged. Purging protocol and field sampling logs including equilibrium measurements, pumping rate, and other appurtenant information shall be submitted. Samples shall be analyzed for the following constituents:

Chemical Oxygen Demand	pH
Total Dissolved Solids	Hardness

3. Every 5 years all wells shall be sampled for the Constituents of Concern (COC) listed below, in addition to the monitoring parameters listed above:

ICAP metals	Specific Conductance	Calcium
Magnesium	Potassium	Nitrate
Sodium	Bicarbonate Alkalinity	Sulfate Chloride

Leachate Monitoring

The objectives of leachate monitoring are to characterize leachate quality and evaluate its potential impacts on receiving waters.

The landfill shall be inspected for leachate seeps monthly during the period October through May. An inspection log shall be included in the monitoring report. The log will note, at a minimum, the date, time, flow, weather conditions, extent of the seep (i.e. was it contained onsite or entering surface water drainage courses), and corrective measures employed. Regional Water Board staff shall be notified verbally within 24 hours in the event of an offsite discharge. Leachate seeps shall be corrected immediately upon discovery. If leachate is observed, a representative grab sample shall be taken and analyzed for the constituents listed below:

Chemical Oxygen Demand	Tannins/Lignins
pH	Total Dissolved Solids

General Inspections

The landfill shall be inspected monthly during the period October through May for erosion, drainage problems, cover integrity, and ponding atop the landfill. Problem areas shall be identified and corrected immediately. A log of the inspections and corrective measures shall be submitted with the monitoring report.

Settlement Monitoring

The objective of settlement monitoring is to track the cumulative settlement of the low-permeability layer in order to determine when the layer requires repair.

The site shall be inspected visually each winter for signs of ponding. The site shall be surveyed for settlement every five years after closure. Results of the survey and settlement evaluation shall be included in the July monitoring report. The survey shall be presented on 24" x 36" maps with a maximum 2-foot contour. The evaluation shall include:

1. Initial closure grades and contours,
2. Current grades and contours,
3. Map showing any interim repairs to the vegetative layer and/or the low-permeability cap,
4. Tracking forms showing cumulative settlement and/or repairs to the individual cover layers, and
5. Iso-settlement contours of the vegetative layer and low-permeability layer.

WASTE MANAGEMENT UNIT REPORTING

Waste management unit monitoring reports shall be submitted by July 1 and February 1 of each year. Monitoring reports shall contain any information from monitoring performed more frequently than required or at locations not required by this Program. Data shall be arranged in tabular form so that date, constituent, and concentration are readily discernable.

The July 1 monitoring report shall present current and historical data plotted vs. time. Data for specific constituents shall be plotted with the inter-well background value, which is calculated using a prediction interval method. In the event that groundwater monitoring data from two consecutive quarters exceeds the upper prediction limit, the permittee shall prepare a report evaluating the cause of the increase and propose corrective action measures. A tabular summary of the previous monitoring data, operational problems, violations, and corrective actions employed shall also be provided.

REPORTING SUMMARY

The following table summarizes the due dates for the required reports (note that the due date is the date the report must be *received* by the Regional Water Board):

Due date	**Required submittal**
First day of each month	Monthly discharge sampling results and visual observations from two months prior, (e.g. January results must be received by the Regional Water Board by March 1)
February 1	Semiannual landfill report, including: ▪ results of September groundwater monitoring, and ▪ landfill inspections from October through December
July 1	Annual storm water report, including: ▪ a summary of the wet season observations and collected data, and ▪ results of acute toxicity test (and chronic toxicity test, if one was performed during that year) Semiannual landfill report, including: ▪ test results of April groundwater monitoring, and ▪ landfill inspections from January through May

All monitoring reports shall be transmitted in accordance with the specifications of Resolution 71-5 adopted by the Regional Water Board on February 3, 1971.

Ordered by _____

Susan Warner
Executive Officer

May 16, 2002

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